

REMARKS

By the present amendment, independent claims 3 and 7 have been amended to further clarify the concepts of the present invention. More particularly, claims 3 and 7 have been amended to clarify the step of performing chemical vapor deposition. Entry of these amendments is respectfully requested.

Initially, applicants wish to make of record the telephone interviews of July 10, 14, and 15 conducted between Examiner Kennedy and the undersigned. During these interviews, proposed amendments to claims 3 and 7 were discussed which including the amendments made to claims 3 and 7 herein. No agreement as to allowable subject matter was reached. It is desired to thank the examiner for the courtesies extended during the interviews.

In an Office Action dated July 18, 2003, claims 3-4 were rejected under 35 USC § 103(a) as being unpatentable over the patent to Zhang et al in view of the patent to Park. In addition, dependent claim 5 was rejected under 35 USC § 103(a) as being unpatentable over the above patents to Zhang et al and Park in view of the patent to Schoenfeld et al. Also, dependent claim 6 was rejected under 35 USC § 103(a) as being unpatentable over the above patents to Zhang et al, Park and Schoenfeld in view of the patent to Kuroi et al.

Further, claims 7 and 8 were rejected under 35 USC § 103(a) as being unpatentable over the above patents to Zhang et al and Park in view of the patent to Kuroi et al.

In making these rejections based on the above patents to Zhang et al and Park, it was asserted that the cited Zhang et al patent teaches the method as claimed except for depositing the insulation by performing HDPCVD. The Park patent was then asserted to teach forming an insulating layer using HDPCVD. It was concluded that it would be obvious to use HDPCVD in the method of the Zhang et al patent since the Park patent teaches HDPCVD provides good burying properties with decreased dishing. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

In a prior response, these same rejections were urged to be inapplicable for the following reasons:

(1) Claims 3 and 7 recite that the step of depositing an insulation layer includes a CVD process that consists of HDPCVD.

(2) The Park patent does not supply the teaching deficiencies of the Zhang et al patent since, although the Park patent teaches performing two-step CVD processes

consisting of APCVD and HDPCVD, the Park patent does not teach a CVD process consisting of HDPCVD alone as is presently claimed.

(3) The Park patent teaches that a HDPCVD oxide film alone is unfavorable for filling trenches and therefore a person having ordinary skill in the art would have no motivation to modify the combination of the Park and the Zhang et al patents to achieve the presently claimed invention.

The above reasons as advanced in support of patentability were dismissed in the above-mentioned Action by asserting that independent claim 3, as previously written, did not preclude layers being formed prior to the deposition of the insulation layer. In other words, according to the Action, this independent claim did not exclude performing a two-step CVD process consisting of forming an APCVD layer and then a HDPCVD layer as in the Park patent.

In view of the above position and the last telephone conversation with examiner where further amendments to the claims were suggested, claim 3 now has been amended herein to specifically exclude forming an APCVD layer as in the Park patent. In particular, claim 3 has been amended to recite that an insulation in the element partitioning trench and the mask aligning trench is deposited by a chemical vapor deposition process

consisting of high density plasma chemical vapor deposition, wherein no other insulation layer has been deposited by a plasma process in the trenches prior to the insulation being deposited.

Since the amendment to claim 3 which further distinguishes the claims over the Park patent is applicable to independent claim 7 as well, claim 7 has been amended in a similar fashion. It is submitted that the processes as now presently claimed are not taught or suggested by the cited patents to Zhang et al and Park whether taken singly or in combination.

Further, it must be emphasized that the Park patent teaches at col. 2, lines 20 to 23 that sole HDPCVD oxide film is unfavorable for filling trenches. Accordingly, a person having ordinary skill in the art would have no motivation to modify any combination of the Park and the Zhang et al patents to achieve the presently claimed invention.

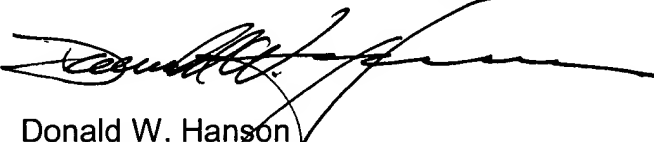
For the reasons stated above, withdrawal of the rejections under 35 U.S.C. § 103(a) and allowance of claims 3 through 8 as amended over the cited Zhang et al and Park patents alone or in combination with the additionally cited patents are respectfully requested.

In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.

In the event this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

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